

CLAIMS LISTING

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1. (Currently amended) A fluorophosphate glass formed from a composition comprising:
- 5 a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from 10 to 60 mol percent;
a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 10 to 60 mol percent;
a fluoride, $\text{BaF}_2 + \text{RF}_x$, wherein RF_x is selected from the group comprising of CaF_2 , MgF_2 , PbF_2 , and BiF_3 , from 10 to ~~75~~ 80 mol percent; and
a rare earth dopant selected from a group consisting of neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.
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2. (Currently amended) A fluorophosphates glass formed from a composition comprising:
- 15 a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from 10 to 60 mol percent;
a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 10 to 60 mol percent;
a fluoride, RF_x , from 10 to ~~75~~ 80 mol percent, selected from the group consisting of: BaF_2 , CaF_2 , MgF_2 , PbF_2 , and BiF_3 ; and
a dopant.
- 20
3. (Canceled)
4. (Currently amended) The glass as in claim 2 wherein the dopant is selected from the group of comprising: the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr);
- 25 samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.
5. (original) The glass as in claim 4 wherein the dopant is selected from the oxides of the rare earth elements.

6. (Previously presented) The glass as in claim 4 wherein the dopant on a weight percent basis is 2 to 15 percent.

7. (original) The glass as in claim 4 wherein the dopant is selected from the fluorides of the rare earth elements.

8. (currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from 10 to 60 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 10 to 60 mol percent;

a fluoride, $\text{BaF}_2 + \text{RFX}$, wherein RFX is selected from the group comprising of CaF_2 , MgF_2 , PbF_2 , and BiF_3 , from 10 to ~~75~~ 80 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.

9. (currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from 5 to 90 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 5 to 90 mol percent;

a fluoride, $\text{BaF}_2 + \text{RFX}$, wherein RFX is selected from the group comprising of CaF_2 , MgF_2 , PbF_2 , and BiF_3 , from 5 to ~~30~~ 90 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm), europium (Eu), an oxide of manganese (Mn); and mixtures thereof.

10. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from 10 mol to 45 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 5 to 30 mol percent;

5 a fluoride, $\text{BaF}_2 + \text{RF}_x$, wherein RF_x is selected from the group comprising of CaF_2 , MgF_2 , PbF_2 , and BiF_3 , from 45 to ~~75~~ 85 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm),

10 europium (Eu), an oxide of manganese (Mn); and mixtures thereof.

11. (Previously presented) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, approximately 10 mol percent;

15 a metaphosphate, $\text{Al}(\text{PO}_3)_3$, approximately 18 mol percent;

a fluoride, BaF_2 , approximately 72 mol percent; and

a dopant, approximately 10 weight percent: of the oxide of neodymium (Nd).

12. (Currently amended) A fluorophosphate glass formed from a composition comprising:

20 a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, approximately 10 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, approximately 18 mol percent;

a fluoride, BaF_2 , approximately 72 mol percent; and

a dopant, approximately 20 weight percent: of the oxide of erbium (Er).

25 13. (withdrawn)

14. (withdrawn)

15. (withdrawn)

16. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from ~~40~~ 5 to 60 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from ~~40~~ 5 to 60 mol percent;

5 a fluoride, $\text{BaF}_2 + \text{RF}_x$ wherein RF_x is selected from a group consisting of CaF_2 , MgF_2 , PbF_2 , and BiF_3 , from 10 to 90 mol percent;

a dopant [.]; and

wherein the selection of the mol percent for the fluoride, $\text{BaF}_2 + \text{RF}_x$ is a determining factor from which the mol percent of the metaphosphates are selected to provide a 100 percent mol composition for the fluorophosphate glass.

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17. (Canceled)

18. (Currently amended) The glass as in claim 16 wherein the dopant is selected from the group comprising of: the rare earth elements neodymium (Nd), erbium (Er),
15 ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), samarium (Sm), europium (Eu), praseodymium (Pr); an oxide of manganese (Mn); and mixtures thereof.

19. (Original) The glass as in claim 18 wherein the dopant is selected from the oxides of
20 the rare earth elements.

20. (Previously presented) The glass as in claim 18 wherein the dopant on a weight percent basis is 2 to 15 percent.

21. (Original) The glass as in claim 18 wherein the dopant is selected from the fluorides
25 of the rare earth elements.

22. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from 5 to 60 mol percent;
a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 5 to 60 mol percent;
a fluoride, $\text{BaF}_2 + \text{RFx}$ selected from the group comprising of CaF_2 , MgF_2 , PbF_2
and BiF_3 , from 10 to 90 mol percent; and

5 a dopant, from 2 to 20 weight percent, selected from the group consisting of: the
oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb),
thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm),
europium (Eu); an oxide of manganese (Mn); and mixtures thereof.

10 23. (Currently amended) A fluorophosphate glass formed from a composition
comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from 5 to 90 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 5 to 90 mol percent;

15 a fluoride, $\text{BaF}_2 + \text{RFx}$ wherein RFx is selected from the group comprising of
 CaF_2 , MgF_2 , PbF_2 and BiF_3 , from 5 to 90 mol percent; and

a dopant, from 2 to 20 weight percent, selected from the group consisting of: the
oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb),
thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm),
europium (Eu); an oxide of manganese (Mn); and mixtures thereof.

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24. (Currently amended) A fluorophosphate glass formed from a composition
comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, from ~~10~~ 5 to 45 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, from 5 to 30 mol percent;

25 a fluoride, $\text{BaF}_2 + \text{RFx}$ wherein RFx is selected from the group comprising of
 CaF_2 , MgF_2 , PbF_2 and BiF_3 , from 45 to 90 mol percent; and

a dopant, from 2 to 20 weight percent, selected from the group consisting of: the
oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb),

thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu); an oxide of manganese (Mn); and mixtures thereof [.]; and

wherein the selection of the mol percent for the fluoride, $\text{BaF}_2 + \text{RF}_x$ is a determining factor from which the mol percent of the metaphosphates are selected to provide a 100 percent mol composition for the fluorophosphate glass.

25. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, approximately 10 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, approximately 18 mol percent;

a fluoride, $\text{BaF}_2 + \text{RF}_x$ wherein RF_x is selected from the group comprising of CaF_2 , MgF_2 , PbF_2 and BiF_3 , approximately 90 ~~70~~ 72 mol percent; and

a dopant, approximately 5 weight percent: of the oxide of neodymium (Nd).

26. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $\text{Ba}(\text{PO}_3)_2$, approximately 10 mol percent;

a metaphosphate, $\text{Al}(\text{PO}_3)_3$, approximately 18 mol percent;

a fluoride, $\text{BaF}_2 + \text{RF}_x$ wherein RF_x is selected from the group comprising of CaF_2 , MgF_2 , PbF_2 and BiF_3 , approximately 90 ~~70~~ 72 mol percent; and

a dopant, approximately 10 weight percent: of the oxide of erbium (Er).

27. (Withdrawn)

28. (Withdrawn)

29. (Withdrawn)